AMENDMENTS TO THE CLAIMS

1. (currently amended) Device for regulated heating of a medium in a dental handpiece, comprising

a) at least one media line which can be opened via a switch,

b) a heating element associated with the media line,

c) a temperature sensor detecting the temperature of the medium, and

d) a regulation circuit connected with the temperature sensor and which controls the heating element in dependence upon signals provided by the temperature sensor ~~the sensor signals~~,

wherein

the heating element is, after actuation of the switch, operable for a short period of time at a predetermined heating power independent of an ~~the~~ output signal of the regulation circuit.

2. (currently amended) Device according to claim 1,

the regulation circuit including a capacitor,

wherein

the duration of the short period of time during which the heating element is operated at a predetermined heating power ~~a suppression time of regulation~~ is dependent upon a delay of the capacitor ~~a switch on interval of the switch~~.

3. (previously presented) Device according to claim 1,

wherein

the device comprises a further media line which can be opened by a second switch, with which further media line there are associated a second heating element, a second temperature sensor, and a second regulation circuit, the second regulation circuit controlling the second heating element in dependence upon sensor signals of the second temperature sensor.

4. (previously presented) Device according to claim 3,

wherein

the first media line is provided for the delivery of air and the second media line is provided for the delivery of water, wherein upon simultaneous actuation of the first and second switches the heating element for the first media line is switched off.

5. (currently amended) Device for regulated heating of a medium in a dental handpiece, comprising

a first media line for air which can be opened via a first switch and a second media line for water which can be opened via a second switch,

there being associated with each media line a respective heating element, a respective temperature sensor detecting the temperature of the respective medium, and a respective regulation circuit connected with a corresponding temperature sensor,

the regulation circuits controlling the respective heating elements in dependence upon signals provided by the respective temperature sensor ~~the sensor signals~~,

wherein

upon simultaneous actuation of the first switch and the second switch ~~switches~~ the heating element for the first ~~air~~ media line for air is switched off.

6. (previously presented) Device according to claim 5,

wherein

after actuation of the first switch the associated heating element for the air media line is operable for a short period of time at a predetermined heating power independent of the output signal of the associated regulation circuit.

7. (currently amended) Device according to claim 6,

the regulation circuit including a capacitor

wherein

a suppression time of the output signal of the associated regulation circuit for the heating element for the air media line is dependent upon a delay of the capacitor ~~switch-on interval of the switch~~.

8. (previously presented) Device according to claim 5,

wherein

the regulation circuit or circuits control is via a transistor, an optotriac switching at zero crossing, which optotriac switches a power triac for the heating current of the heating element concerned.

9. (previously presented) Device according to claim 8,

wherein

there is connected to a base terminal of the transistor for air heating an RC member which after actuation of the first switch for the air media heating suppresses the output signal of the regulation circuit for a short period of time.

10. (currently amended) Device according to claim 5,

wherein

the temperature sensors are ~~sensor or sensors is (are)~~ arranged directly in the associated media line.

11. (previously presented) Device according to claim 8,

wherein

there is provided in the media line for water a heat exchanger element which is thermally coupled with the power triac for returning heat loss arising at the power triac for the water heating.

12. (previously presented) Device according to claim 11,

wherein

the power triac for the water heating and the heat exchanger element are arranged on a common circuit board and connected with one another via a metallized layer.

13. (previously presented) Device according to claim 11,

wherein

the power triac for the water heating and the heat exchanger element are arranged on a common cooling body.

14. (previously presented) Device according to claim 11,

wherein

the heat exchanger element forms a bearing surface for the power triac for the water heating.

15. (previously presented) Device according to claim 11,

wherein a heat conductive paste is applied

in the region of the bearing surfaces for the power triac for the water heating and for the heat exchanger element.

16. (currently amended) Device for the regulated heating of a medium in a dental handpiece, comprising

a) at least one media line which can be opened via a switch,

b) a heating element associated with the media line,

c) a temperature sensor detecting the temperature of the medium,

d) a regulation circuit connected with the temperature sensor and which controls the heating element in dependence upon signals provided by the temperature sensor ~~the sensor signals~~, the regulation circuit including a first set of electronic components,

and,

e) a heat exchanger element provided in the media line which for the return of heat loss arising at the first set of electronic components of the regulation circuit is thermally coupled with the media line ~~regulation circuit~~.

17. (previously presented) Dental spray handpiece for the delivery of air and/or water,

comprising

a heating device for regulated heating of the air and or water in accordance with claim 1.

18. (currently amended) Dental spray handpiece according to claim 17,

the heating device including a second set of electronic components,

wherein

the temperature sensor or sensors and the ~~further~~ second set of electronic components of the heating device are arranged completely within the handpiece.

19. (previously presented) Device according to claim 1, wherein the regulation circuit or circuits control is via a transistor, an optotriac switching at zero crossing, which optotriac switches a power triac for the heating current of the heating element concerned.

20. (previously presented) Device according to claim 19, wherein there is connected to a base terminal of the transistor for air heating an RC member which after actuation of the first switch for the air media heating suppresses the output signal of the regulation circuit for a short period of time.

21. (previously presented) Device according to claim 19, wherein there is provided in the media line for water a heat exchanger element which is thermally coupled with the power triac for returning heat loss arising at the power triac for the water heating.

22. (previously presented) Device according to claim 21, wherein the power triac for the water heating and the heat exchanger element are arranged on a common circuit board and connected with one another via a metallized layer.

23. (previously presented) Device according to claim 21, wherein the power triac for the water heating and the heat exchanger element are arranged on a common cooling body.

24. (previously presented) Device according to claim 21, wherein the heat exchanger element forms a bearing surface for the power triac for the water heating.

25. (previously presented) Device according to claim 21, wherein a heat conductive paste is applied in the region of the bearing surfaces for the power triac for the water heating and for the heat exchanger element.

26. (previously presented) Device according to claim 1, wherein the temperature sensor or sensors is (are) arranged directly in the associated media line.

27. (previously presented) Dental spray handpiece for the delivery of air and/or water, comprising a heating device for regulated heating of the air and or water in accordance with claim 5.

28. (currently amended) Dental spray handpiece according to claim 27, the heating device including a second set of electronic components, wherein the temperature sensor or sensors and the second set of ~~further~~ electronic components of the heating device are arranged completely within the handpiece.

29. (previously presented) Dental spray handpiece for the delivery of air and/or water, comprising a heating device for regulated heating of the air and or water in accordance with claim 16.

30. (currently amended) Dental spray handpiece according to claim 29, the heating device including a second set of electronic components, wherein the temperature sensor or sensors and second set of ~~further~~ electronic components of the heating device are arranged completely within the handpiece.